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09/689,228	10/11/2000	Craig H. Barratt	015685.P019C	2662

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR  
LOS ANGELES, CA 90025

EXAMINER

GESESSE, TILAHUN

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 09/30/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/689,228

Applicant(s)

BARRATT ET AL.

Examiner

Tilahun B Gesesse

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2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 40-97 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48, 50-54, 57-71, 73-75, 77-87, 89-91 and 94-97 is/are rejected.
- 7) ☒ Claim(s) 49, 55, 56, 72, 76, 88, 92 and 93 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 40-97 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of U.S. Patent No.

6,185,440. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter in the conflicting claims is also claimed in the identified patent, such as, processing procedures; transmitting the plurality of processed signals through a coupled antenna array and generating a desired radiation level at a number of locations within the desired sector.

Claims 40-97 are conflicting and not patentably distinct from each other.

Therefore, obviousness-type double patenting is applied.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 40-48,50-54,57-71,73-75,77-87,89-91,94-97 are rejected under 35 U.S.C. 102(e) as being anticipated by Ottersten et al (U.S. pat. No. 5,828,658)"**Ottersten**".

As to claims 40,57-59, Ottersten discloses a method comprising: processing a signal through a plurality of signal **processing procedures** (column 15, line 37-column 16, line 23 and figure 5) to generate a plurality of processed signals (column 16, lines 14-30 and figure 5) and sequentially transmitting the plurality of processed signals through a coupled antenna array (column 16, lines 14-30, column 24 lines 29-41 and figures 1 and 5), generating a desired radiation level at a number of locations within a desired sector (column 16 lines 38-48 and figures 1 and 11). Ottersten discloses

iteratively processing signal is transmitted through plurality of antennas (column 13, line 55-column 14 line 7 and figure 8).

As to claim 41,96-97, Ottersten discloses the signal is transmitted using a CDMA protocol (column 13, lines 40-48).

As to claims 42-43,50-52,65,-66 Ottersten discloses the desirable radiation level is a non-null level (column 18 lines 36-49)

As to claims 44-46,53-54,67-69,84-85,95, Ottersten discloses as explained above and further more, Ottersten discloses selecting a weight vector from sequence of different weight vectors, wherein elements of the weight vectors selectively modify one or more characteristics of transmission of the signal from each antenna in the antenna array (column 15 line 38 through column 16 line 13 and figure 5 and 8).

As to claims 47-48,70-71,77,87 Ottersten discloses sequence of weight vector is comprised of weight vectors that are orthogonal (column 25, line 63-column 26 line 10).

Claims 60,62, which recites the steps for implementing the apparatus as clam 40, is rejected for the same reason as set forth in the claim.

As to claim 61,79, Ottersten discloses the processing elements are comprised of one or more a DSP (column 13 lines 55-68 and figure 8).

As to claim 63-64, Ottersten discloses all the limitation as explained above and futher more, Ottersten discloses a transceiver, coupled with antenna array and the processors (figure 1).

As to claims 74-75, Ottersten discloses the processor element (figure 8) develop the sequence of weight vectors and spatial signature designed to provide a desirable

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radiation pattern based, a communication associated in the desired sector (column 13 lines 55-68 and figure 8).

Claim 78, which recites the steps for implementing the apparatus of claim 40, is rejected for the same reason as set forth in the claim.

As to claims 80-83, 86, 89-91, 94 Ottersten discloses one or more transceiver, coupled with the antenna array and the processor element, to sequentially transmit each of the generated plurality of processed signals to achieve the desired radiation level at a number of locations in the desired sector during at least one of said sequential transmissions, and a broadcast transmission (column 26, line 54-column 27 line 25 and figure 11).

***Allowable Subject Matter***

5. Claims 49, 55-56, 72, 76, 88, 92-93 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose the orthogonal weight vectors from one or more rows or columns of the complex valued Walsh-Hadamard matrix and a sequence of elements are basis vectors of a Fourier transform.

***Response to Arguments***

6. Applicant's arguments with respect to claims 40-48,50-54,57-71,73-75,89-91,94-97 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Liu et al disclose a plurality of antenna array radiating to a number of location (Ter.1 to Termanl P) and plurality of signal processing procedures monitoring the phase and amplitude of the radiated signal to a different sectors (fig.4 and 5).

Wachs (EP 713261) disclose a plurality of antenna array radiating at sectors in the serving area and adjust amplitude and phase of the radiated signal (abstract).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tilahun B Gesesse whose telephone number is 703-308-5873. The examiner can normally be reached on flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

TBG

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**TILAHUN GESESSE**  
**PATENT EXAMINER**